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EXAMINER	
SAINT CYR, LEONARD	

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,013	FRIMPONG-ANSAH, KWAKU	
	Examiner	Art Unit	
	LEONARD SAINT CYR	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 September 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 04/20/10 have been fully considered but they are not persuasive.

Applicant argues that neither Boys nor Yokota disclose or suggest voice recognition means for performing voice recognition on the audio data and generating text data and word-marking data, the work marking data indicating locations of word boundaries between spoken words with the audio data and linking words in the audio data to corresponding words in text data; . (Amendment, pages 9, and 10).

The examiner disagrees, since Boys disclose "Select functions, such as by simple voice-recognition, wherein **simple commands may be spoken to and recognized by the Audio Editor**. The problems in general voice recognition also are far from trivial...a machine has a real problem determining **where one word ends and another begins**. A user may speak a word or a phrase, and the system will rapidly **search the document for a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches** (moving the pointer to the beginning of a data string that matches is considered as indicating a word marking data; col.2, lines 45 – 47; col.6, line 66–col.7, line 1; col.14, lines 17 – 22). In a preferred embodiment input of machine-operable text code with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region** (col.4, lines 34 – 38).

Applicant argues that neither Boys nor Yokota disclose or suggest the control means controlling the displaying on the display means of the stored text data that corresponds to the audio data being replayed, as indicated by the word-marking data (Amendment, pages 9, and 10).

The examiner disagrees, since Boys discloses "A user may speak a word or a phrase, and the system will rapidly **search the document for a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches.** In a preferred embodiment input of machine-operable text code with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region** (col.4, lines 34 – 38; col.14, lines 17 - 22).

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17 – 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **Claims 17 – 20** are directed to a computer readable medium storing processor executable instructions that is not limited to a non-transitory, and thus, statutory medium. The scope of "computer-readable medium" since not defined in the specification can encompass signal-based mediums such as "signals used to propagate instructions", "carrier waves/pulses". A signal does not fall within one of the four statutory categories of invention *(i.e., process, machine, manufacture, or*

composition of matter) because it is an ephemeral, transient signal and thus is non-statutory. Since the scope of "computer-readable medium" can include these non-statutory instances, **Claims 17 – 20** are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boys et al (US Patent 5,875,448) in view of Yokota et al., (EP 0597483).

Regarding claims 1 and 8, Boys et al. discloses an arrangement for replaying stored audio data (see col. 3, line 50), the system comprising:

voice recognition means for performing voice recognition ("voice-recognition") on the audio data and generating by the voice recognition means text data and word-marking data ("**beginning of a data string")**, the word-marking data indicating locations of word boundaries between spoken words within the audio data ("**a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches";** col.2, lines 45 – 47; col.6, line 66–col.7, line 1; col.14, lines 17 – 22), and linking words in the audio data to corresponding words in the text data ("with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region**"; col.4, lines 34 – 38);

memory means for storing the audio data and for storing the text data and the word-marking data obtained from performing voice recognition on the audio data ("end

of the file"; see col. 3, lines 48, 49; col.11, lines 5 – 8; col.6, lines 65 – 67; col.4, lines 12; and 34 - 38);

display means for visually displaying the text data ("with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region**"; col.4, lines 34 – 38).

audio replaying means for replaying the audio acoustically in a forward sequence; and control means for controlling the replaying of stored audio data in a forward mode and in a reverse mode, the control means controlling the audio replaying means during a playback of the audio data in the reverse mode to perform a reverse mode playback operation including, starting from a replay position in the audio data ("a function called Return associated with Play moves the pointer immediately back to the position it held in the file at the beginning of the play function. The jog and Play functions are provided for a user to find positions in the file where additions, editing, or other functions are to be performed"col.13, lines 5 – 8, and 30 – 33; col.11, lines 1 - 8);

the control means controlling the displaying on the display means of the stored text data that corresponds to the audio data being replayed, as indicated by the word-marking data ("**search the document for a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches.** In a preferred embodiment input of machine-operable text code with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region";** col.4, lines 34 – 38; col.14, lines 17 - 22).

However, Boys et al do not specifically teach initiating a backward jump, counter to the forward sequence over a distance corresponding to a length of at least N words using the word boundaries indicated in the word-marking data, to a target position, and then, starting from the target position, the control means initiates a replay of K words of the audio data in the forward sequence using the word boundaries indicated in the word-marking data, wherein K is less than N, the control means further controlling the audio replaying means and the display means to automatically repeat performing the reverse mode playback operation while the system is in the reverse mode.

Yokota et al., teach that hybrid playback is a combination of fast playback operations in cue and review modes. In this example, review playback is performed program by program, but cue playback is performed within each program. **Most specifically, first the aforementioned cue playback is performed from the beginning of the 5th program and after completion of the 5th program, the playback jumps from the last data position of the 5th program to the beginning of the 4th program, and the cue playback of the 4th program is performed**...Thereafter the above playback operation is advanced similarly for the next and subsequent programs (Performing cue playback in each program and jumping from **the last data position of that program** to the beginning of the next and subsequent program implies replaying of K words of the audio data in the forward sequence using the word boundaries indicated in the word-marking data, since backward jumping is based on **the last data position of the program;** col.12, lines 3 – 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use hybrid playback as taught by Yokota et al., in Boys et al., because that would provide an improved disc playback method which is capable of performing fast playback (col.1, lines 41 – 44).

Regarding claims 2 and 9, Yokota et al., further disclose repeating the reverse playback operation causes each of the K words on each repetition of the playback operation to be replayed acoustically in the forward sequence and in order counter to the forward sequence ("Most specifically, first the aforementioned cue playback is performed from the beginning of the 5th program and after completion of the 5th program, the playback jumps from the last data position of the 5th program to the beginning of the 4th program, and the cue playback of the 4th program is performed"; col.12, lines 3 – 20).

Regarding claim 3, Boys et al. further disclose that a counting means is assigned to control means in order to count the marking data reached during backward jumping or replaying (see col. 11, lines 1-8).

Regarding claim 4, Boys et al. further disclose that a timing circuit is assigned to control means in order to calculate the duration of the audio replay (see col. 11, lines 41-50).

Regarding claim 5, Boys et al. further disclose that setting means is connected to control means in order to set the speed of the audio replay (see col. 11, lines 41-50).

Regarding claims 6 and 15, Boys et al. further disclose that the control means is further connected to text memory means for storing text data corresponding to the audio data (see col. 7, lines 44-49), which is connected to text display means (see col. 7, lines 26-29), and wherein the control means is set up to initiate, by means of linkage data for the audio data and text data, a synchronous replaying of the audio data and the text data corresponding to it (see col. 12, lines 30-41, lines 52-67).

Regarding claim 7, Boys et al. further disclose that the control means and the text memory means and the memory means for the audio data are connected to voice recognition means, which undertakes an automatic transcription of the audio data to generate the text data ("converted the recorded areas to text"; see col. 16, lines 35-42).

Regarding claim 10, Boys et al. further disclose that replaying in the forward sequence is automatically terminated when the next word-marking data is reached during replaying (see col. 13, lines 1-8).

Regarding claim 11, Boys et al. further disclose that replaying in the forward sequence is automatically terminated after a specified period (see col. 13, lines 1-8).

Regarding claim 12, Boys et al. further disclose that termination of the replay in the forward sequence, a backward jump over a return distance corresponding to the length of at least roughly two words takes place automatically (see col. 13, lines 1-8).

Regarding claim 13, Boys et al. et al. further disclose that the backward jump in the audio data is undertaken at a speed that is higher than the replay speed during replaying in the forward sequence, and without acoustic replaying of the stored audio data ("operates at faster than normal"; paragraph 12, lines 55 – 60).

Regarding claim 14, Boys et al. et al. further disclose that the replaying of the stored audio data in the forward sequence takes place at an adjustable replay speed (see col. 11, lines 41-47).

Regarding claim 16, Boys et al. et al. further disclose that during the visual displaying of multiple words of the text data, the particular visually displayed word for which the corresponding audio data is being replayed is visually highlighted (see col. 4, lines 51-58, where the cursor highlights the word).

Regarding claim 17, Boys et al. et al. further disclose that the text data corresponding to audio data is obtained by means of an automatic voice recognition of the audio data, wherein, simultaneously, the word-marking data is generated and stored as linkage data for the text data and audio data that correspond with each other

("comparison can be made between the entered text and the voice-recorded" see col. 7, lines 36-50; col. 16, lines 35-48).

Regarding claim 18, Boys et al. et al. further disclose that a computer program product that can be loaded into a memory of a computer, and which comprises sections of software code in order that, by means of their implementation following loading into the memory, the method as claimed in claim 8 can be implemented with the computer (see col. 16, lines 51-53).

Regarding claim 19, Boys et al. et al. further disclose that a computer program product as claimed in claim 18, characterized in that it is stored on a computer-readable medium (see col. 16, lines 51-53).

Regarding claim 20, Boys et al. et al. further disclose that a computer with a processing unit and an internal memory, which computer is designed to implement the computer program product as claimed in claim 18 (see col. 16 lines 51-53).

As per claim 21, Boys et al., teach an arrangement for replaying stored audio data comprising:

a voice recognition system configured to perform voice recognition on the audio data and to generate text data and word-marking data (**"beginning of a data string")**, the word-working data indicating locations of word boundaries between spoken words

within the audio data ("**a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches";** col.2, lines 45 – 47; col.6, line 66–col.7, line 1; col.14, lines 17 – 22), and linking words in the audio data to corresponding words in the text data ("with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region**"; col.4, lines 34 – 38);

a memory configured to store the audio data and to store the text data and the word-marking data obtained from performing voice recognition on the audio data ("end of the file… location of the file"; see col. 3, lines 48, 49; col.11, lines 5 – 8; col.6, lines 65 – 67; col.4, line 12);

a display device configured to visually display the text data ("with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region**"; col.4, lines 34 – 38);

the controller further configured to display on the display device the text data that corresponds to the audio data being replayed, as indicated by the word-marking data ("**search the document for a data string to match the digital print of the spoken phrase, moving the pointer to the beginning of a data string that matches.** In a preferred embodiment input of machine-operable text code with the cursor in a voice region **results in text being displayed in place of equivalent portions of the voice region";** col.4, lines 34 – 38; col.14, lines 17 - 22).

Boys et al., do not specifically teach a controller configured to playback the audio data in a reverse mode by jumping back N words using the word boundaries indicated

in the word-marking data, playing back K words using the word boundaries indicated in the word-marking data, and then automatically repeating the jumping and playing back while in the reverse mode, wherein K is less than N.

Yokota et al., teach that hybrid playback is a combination of fast playback operations in cue and review modes. In this example, review playback is performed program by program, but cue playback is performed within each program. **Most specifically, first the aforementioned cue playback is performed from the beginning of the 5th program and after completion of the 5th program, the playback jumps from the last data position of the 5th program to the beginning of the 4th program, and the cue playback of the 4th program is performed**...Thereafter the above playback operation is advanced similarly for the next and subsequent programs (Performing cue playback in each program and jumping from **the last data position of that program** to the beginning of the next and subsequent program implies replaying of K words of the audio data in the forward sequence using the word boundaries indicated in the word-marking data, since backward jumping is based on **the last data position of the program;** col.12, lines 3 – 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use hybrid playback as taught by Yokota et al., in Boys et al., because that would provide an improved disc playback method which is capable of performing fast playback (col.1, lines 41 – 44).

As per claim 22, Yokota et al., **further suggest** that N=2 and K=N-1("first the aforementioned cue playback is performed from the beginning of the 5th program and after completion of the 5th program, the playback jumps from the last data position of the 5th program to the beginning of the 4th program, and the cue playback of the 4th program is performed"; col.12, lines 3 – 20).

As per claims 23, and 24, Yokota et al., further suggest that the controller is configured to skip playback of a number of the words so that only every fourth or fifth of the words is replayed; configured to skip playback of a number of the words so that only every predetermined number of the words is replayed ("skipping 8 sectors which correspond to four of a 2-sector unitary block"; col.10, lines 42 – 48).

As per claim 25, Yokota et al., further disclose playing back is for a predetermined duration after which the automatically repeating the jumping and the playing back are performed ("first the aforementioned cue playback is performed from the beginning of the 5th program and after completion of the 5th program, the playback jumps from the last data position of the 5th program to the beginning of the 4th program, and the cue playback of the 4th program is performed"; col.12, lines 3 – 20).

As per claim 26, Yokota et al., further disclose that the jumping back is for a return distance which is one of as estimated mean data duration of the N words and determined from a word-marking data associated with the audio data ("the playback

jumps from the last position of the 5th program to the beginning of the 4th program" col.12, lines 3 – 20).

As per claim 27, Yokota et al., further disclose the playing back is terminated in response to reaching one of a word-marking data associated with an end of the Kth word and a predetermined replay time ("cue playback is performed from the beginning of the 5th program and after completion of the 5th program"; col.12, lines 3 – 20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571)272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or (571)-272-1000.

LS
07/03/10
/Leonard Saint-Cyr/

Examiner, Art Unit 2626